

**Notice of Allowability**

Application No.

09/676,888

Examiner

Anh-Vu H Ly

Applicant(s)

BARRATT ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to preliminary amendment filed March 31, 2005.
2. ☒ The allowed claim(s) is/are 1-10, 12-27, 31-32, 34-51, 53-61, and 63-68 renumbered as 1-61.
3. ☒ The drawings filed on 29 September 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 2/26/01; 8/27/01; 6/1/03; 7/30/02; 3/5/02
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Vincent H Anderson on April 01, 2005.

The application has been amended as follows:

***In The Claims***

Claim 32, in line 18, replace "the same conventional" with - -the first downlink conventional- -.

Claims 40 and 41, in lines 1-2, replace "downlink data" with - -downlink signal- -.

***Allowable Subject Matter***

2. Claims 1-10, 12-27, 31-32, 34-51, 53-61, and 63-68 are allowed.

The prior art does not teach or fairly suggest providing one or more further sets of sequential time intervals, each set of the one or more further sets of sequential time intervals associated with one or more other communication stations of the communication system, the further sets of sequential time intervals for communication between the other communication stations and one or more other remote communication devices associated with the other communication stations; receiving one or more uplink signals from one or more of the other, undesired remote communication devices as interference on one or more uplink channels

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associated with a first downlink conventional channel; determining a downlink smart antenna processing strategy for transmitting from the first communication station in a non-directional manner on the first downlink conventional channel, the strategy including mitigating interference towards the one or more other remote communication devices to reduce, with respect to the one or more undesired remote communication devices, a strength of a signal transmitted by the first communication station on the first downlink conventional channel, the downlink processing strategy using the received uplink signals as inputs to provide interference mitigation; and transmitting a downlink signal in non-directional manner from the first communication station on the first downlink conventional channel using the determined downlink processing strategy, as specified in independent claims 1, 32, 42, and 53.

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Masenten et al (US Patent No. 6,823,174 B1) discloses an adaptive antenna.

Leifer et al (US Pub 2002/0013164 A1) discloses a method and apparatus for modifying a smart antenna processing strategy.

Youssefmir et al (US Patent No. 6,795,409 B1) discloses cooperative polling in a wireless data communication system having smart antenna processing.

Bar-Ness (US Patent No. 6,137,785) discloses wireless mobile station receiver structure with smart antenna.


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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600  
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